



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SUPERFUND SITE STRATEGY RECOMMENDATION - REGION 06



Site Name: Jackpile-Paguate Uranium Mine

CERCLIS ID#: NMN000607033

Alias Site Name: _____

Address: SR 279, Near Paguate, Laguna Pueblo



City/County or Parish/State/Zip: Paguate/Cibola/ New Mexico

Report Type: SI

Date: May 2011

Author: Weston

RECOMMENDATION:

<input type="checkbox"/> 1. No Further Remedial Action Planned Under Superfund (NFRAP)	<input checked="" type="checkbox"/> 2. Further Investigation Needed Under Superfund												
	<table><tr><td><input type="checkbox"/> PA</td><td><input type="checkbox"/> HRS</td><td>Priority: <input type="checkbox"/> High</td></tr><tr><td><input type="checkbox"/> SI</td><td><input type="checkbox"/> RI/FS</td><td><input type="checkbox"/> Low</td></tr><tr><td><input checked="" type="checkbox"/> ESI</td><td><input type="checkbox"/> RA</td><td></td></tr><tr><td><input type="checkbox"/> Other: _____</td><td></td><td></td></tr></table>	<input type="checkbox"/> PA	<input type="checkbox"/> HRS	Priority: <input type="checkbox"/> High	<input type="checkbox"/> SI	<input type="checkbox"/> RI/FS	<input type="checkbox"/> Low	<input checked="" type="checkbox"/> ESI	<input type="checkbox"/> RA		<input type="checkbox"/> Other: _____		
<input type="checkbox"/> PA	<input type="checkbox"/> HRS	Priority: <input type="checkbox"/> High											
<input type="checkbox"/> SI	<input type="checkbox"/> RI/FS	<input type="checkbox"/> Low											
<input checked="" type="checkbox"/> ESI	<input type="checkbox"/> RA												
<input type="checkbox"/> Other: _____													
To be performed by: <u>Weston</u>													
<input type="checkbox"/> 3. Action Deferred to: <input type="checkbox"/> RCRA <input type="checkbox"/> NRC													
<input type="checkbox"/> 4. Site Being Addressed Under the State Voluntary Cleanup Program (VCP): <input type="checkbox"/> Yes <input type="checkbox"/> No													

NOTIFY AUTHORITY:

<input type="checkbox"/> Removal	<input type="checkbox"/> RCRA	<input type="checkbox"/> TSCA	<input type="checkbox"/> CAA	<input type="checkbox"/> SMCRA
<input type="checkbox"/> Remedial	<input type="checkbox"/> State/Tribe	<input type="checkbox"/> NPDES	<input type="checkbox"/> NRC	<input type="checkbox"/> Resource Trustee: _____
<input type="checkbox"/> CERCLA	<input type="checkbox"/> Federal	<input type="checkbox"/> UIC	<input type="checkbox"/> SPCC	<input type="checkbox"/> Other: _____
Enforcement	Facility			
SEND SSSR COPIES TO: <input type="checkbox"/> 6SF-AC <input type="checkbox"/> 6WQ-SP <input type="checkbox"/> ATSDR <input type="checkbox"/> State Agency <input checked="" type="checkbox"/> Tribal Agency				

DISCUSSION:

A Site Inspection was conducted by Weston Solutions, contractor to EPA, at the Jackpile-Paguate Uranium Mine site located approximately 40 miles west of Albuquerque, New Mexico, near the village of Paguate. The site is located in an area of canyons and arroyos to the east of the village of Paguate. The property on which the former uranium mine is located is approximately 7,868 acres in size. Approximately 2, 656 acres of this property was disturbed and the area consisted of three open pits that were between 200 and 300 feet deep, 32 waste dumps and 33 proto-ore stockpiles.

The mine was operated by Anaconda Minerals Company. Mining operations were conducted from 1953 through 1982. The mine was closed due to depressed uranium mining conditions. During the 29 years of mining, approximately 400 million tons of rock were moved within the mine area and approximately 25 million tons of uranium ore were transported via the Santa Fe Railroad from the mine to Anaconda's Bluewater Mill, approximately 40 miles west of the mine. The primary contaminants that are present in on-site sources include uranium (U-234, U-235, and U-238), arsenic, barium, chromium, cobalt, copper, lead, manganese, vanadium, selenium and zinc. Concentrations of U-238 in the surface water immediately downstream of the mine are as high as 448 ppb, well above the 2.6 ppb benchmark.

The Pueblo of Laguna, BLM, BIA and Anaconda/ARCO entered into an agreement for site remediation in 1986. To date, reclamation has been primarily the covering of mine waste and contouring. In June 1995, the Jackpile Reclamation Project was officially completed. In September 2007, a Record of Decision (ROD) Compliance Assessment was performed to determine if the post-reclamation had met the requirements of the Environmental Impact Statement and ROD. This report

identified several non-compliant issues still needed to be addresses. Despite the reclamation of the surficial mine areas, releases from the mine are still occurring. The Pueblo of Laguna has requested EPA to consider the mine for the NPL.

A Preliminary Assessment (PA) was conducted at the site in April 2010, to identify sources, and evaluate the groundwater, surface water and air pathways. The uranium mine was identified as the sole source on-site. Previous releases to groundwater and surface water have been documented. Previous investigations of groundwater wells have documented fluoride, lead, arsenic, gross alpha, uranium and Radium 226 above EPA MCLs.

Sampling for the Site Investigation (SI) was conducted in March 2010. During the SI, potential sources including open pits, waste dumps and previous protore stockpile areas were documented. The closest drinking water well is 2.49 miles north of the site. All other nearby wells were identified to the north. The groundwater flow is south southwest from the site. Uranium isotopes and total uranium exceeded three times background concentrations in eight samples collected within the Rio Moquine, Rio Pagate and Pagate Reservoir. Manganese exceeded three times background concentration in four samples collected within the Rio Pagate. Total uranium exceeded the EPA Drinking Water MCLs in five samples collected within the Rio Pagate. The Rio Moquino and Rio Pagate bisect the mine and are in direct contact with the source. Based on analytical results, a release to the surface water pathway has been documented. Based on this information, further evaluation of the site is warranted. It is recommended that an Expanded Site Investigation (ESI) be conducted at the site to further investigate the surface water and groundwater pathways, collect sediment samples, gather groundwater well data and fill any data gaps.

APPROVALS:

Report Reviewed by: LaDonna Turner
(Site Assessment Manager)

Signature: LaDonna Turner

Date: 12/01/11

Disposition
Approved by: John Meyer
(Section Chief 6SF-TR)

Signature: John Meyer

Date: 12/1/11